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UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA

REPORT ON A MISSION TO MOZAMBIQUE
(29 March - 11 April 1989)

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This report is the sole responsibility of the writers. It has been submitted to the Department of Technical Co-operation, United Nations.

I. INTRODUCTION

The mission was undertaken jointly by the ECA Regional Advisers in Demographic Statistics and Census Cartography from 29 March to 11 April 1989 at the request of the Government of Mozambique to help Direcçäa Nacional de Estatistica DNE reformulate the programme for the next population census and provide technical guidance on organization and implementation of various census activities.

II. CONSULTATIONS

During the course of the mission the Regional Advisers held discussions with several officials of DNE and other Government Ministries and Departments and other agencies whose names are given in Annex I. The advisers wish to express their deep appreciation to all of them as well as other staff members of DNE and UNFPA for their assistance and co-operation.

III. BACKGROUND

The last population census in Mozambique was conducted in August 1980 and in conformity with a decennial census programme, there is the intention to undertake the next census in August 1990.

Following initial consultations between the Government and UNFPA regarding possible assistance by UNFPA in conducting the 1990 census, a draft project document was prepared with the assistance of ECA Regional Adviser in Demographic Statistics. The final project request was submitted to UNFPA in May 1987.

In view of the prevailing security situation at the time, it was indicated in the project request that a number of activities which could not be conveniently carried out in the immediate future were being conceived as pre-project activities.

The pre-project activities were mainly office cartographic preparations as well as administrative arrangements and training of staff to provide the necessary machinery for planning and conducting the census.

Administrative structure- Mozambique is divided for administrative purposes into 11 provinces which are further sub-divided into 128 districts. The sub-divisions below district level are known as postos de administrativo (administrative posts) localidade and circulo in rural areas and vila, bairro and quarteirão in urban areas but presently the government administrative machinery has been established up to the level of administrative posts only. The organization and conduct of various census field activities including delineation and mapping of enumeration areas will be based on these administrative divisions.

IV. MISSION ACTIVITIES

The activities of the mission started with initial meetings with the UNFPA country Director and the Director of Direcção Nacional de Estatistica(DNE) who briefed the mission about the status of census preparatory activities and the general security situation in the country. The Director of DNE indicated the intention of the government to conduct a population census in August 1990 and asked the mission to assess the feasibility of completing relevant preparatory activities before the proposed date of the census and accordingly revise the work plan.

It was clear from the initial briefing that nothing much in respect of preparations for the census had been done since the submission of the census project request.

Following the briefing by the Director of DNE, a series of discussions and working sessions were held with the acting head of the Demography Department of DNE as well as relevant staff of Direcção Nacional de Geografia E Cadastro (DINAGECA), Departmento de Cartografia of Ministry of Defence, entro de Procesämento de Dados (CPD), Ministërio da Administracão Estatal and Impensa Nacioanal de Moçambique (Government Printing Department).

The discussions and working sessions were held to assess the capability of the various agencies, in terms of manpower and material resources, to undertake or assist in relevant census activities; and also to obtain information on the general security situation in the country in order to determine the scope and feasibility of various census field activities.

On the basis of the discussions and working sessions, the strategy and work plan for the pre-enumeration phase of the census as well as the budget covering UNFPA contribution were revised. The revisions of the relevant sections/sub-sections of the census project request are attached to this report as Annex II.

In accordance with the revised work plan for the pre-enumeration cartographic work a list of equipment was prepared during the mission. In addition, recommendations regarding the minimum staff required for the establishment of a Central Census Office were made. The list of cartographic equipment and the staff requirement of the Central Census Office are given in Annexes III and IV respectively.

V. CONCLUSIONS AND RECOMMENDATIONS

There has been virtually no progress in respect of the project activities since the submission of the Project Request. Further, the security situation seems to have become worse and as a result there has been displacement of large population groups.

It is reported that the current security situation is such that many towns/villages cannot be reached by road transport. The indications are that some Provincial and District headquarters as well as towns in smaller administrative units (Posto Administrativo) could only be reached by air, sea or under military escort. The towns where census field work could be carried out constitute about 40 per cent of the country. The situation, however, seems variable over short periods of time and there have been unpredictable deterioration in the security situation of places often considered safe.

In the area of technical preparations for the census, the situation seems equally unsatisfactory. DNE does not have the professional manpower for the exercise and it may take some time to arrange the release of professional staff from other Government agencies. In any case, such professionals may have very limited experience in census taking, if any.

At the time of the preparation of the project document, the problem was anticipated but it was indicated that a Census Adviser would be available through bilateral arrangements. This has, so far, not materialized and it is therefore planned to include a number of international experts including census cartographer in the budget covering contribution from UNFPA. Since the request is yet to be made, it might take some time for the advisers (census cartographer and general census adviser) to assume duty. It is therefore unlikely that serious statistical and cartographic planning could be started in earnest immediately.

Thus, if a census enumeration were to be conducted throughout the country in August 1990, the preparatory activities will have to be rushed and/or Government facilities particularly manpower and other logistics overstretched. Either case may have adverse effect on the census results.

It should also be pointed out that a major objective of a census is to provide data for small areas in addition to larger administrative units and the total country. The exercise is expensive and thus carried out infrequently; in most countries, at ten-yearly intervals. The data therefore form the basis for long-term planning and projections. If circumstances are such that such an objective could not be realized then the expense involved may not be worthwhile.

In the present security situation in the country, with the displacement of large population groups, the area coverage of the census needs to be limited. Further, the characteristics of a large sector of the population would be affected by the war situation. Such data therefore would likely be relevant for a relatively short period and cannot form the basis for long-term planning and projections since the situation seems rather unstable.

Under the circumstances indicated above, consideration may be given to carrying out only a limited census in 1990 in selected areas of the country with the understanding that a full census of the entire country would be conducted as soon as circumstances permit. Even such limited exercise can be undertaken satisfactorily only if the essential inputs of manpower and material resources could be provided timely.

Alternatively, DNE may collaborate with the Ministry of Public Administration in the administrative population count being planned by the Ministry for August 1989. DNE can assist in ensuring adequate definition of concepts and procedures for the exercise. The population count may thus provide some information for immediate planning purposes.

This alternative would give time for DNE to strengthen its professional and middle-level staff through short-term and long-term training programmes and also carryout adequate cartographic preparations for the next census. Population estimates and information on community level variables could be obtained during the cartographic field work. Thus, proper foundation would be laid for a good census when the situation becomes favourable.

The following is the strategy proposed for the census cartographic preparations:

The cartographic preparations for the previous census were carried out in a very limited way by DINAGECA which has again been entrusted with the responsibility of producing maps needed for the upcoming census. Since the staff of DINAGECA do not have any experience or training in the area of census cartography it is necessary to recruit an international census cartography adviser for a period of 18 months starting August 1989.

In order to establish an ongoing census cartographic programme, the DNE should set up a permanent cartography unit by seconding some core staff of about 4 cartographers from DINAGECA or other departments involved in cartographic work. It is understood that DINAGECA has deployed 3 cartographers on census mapping work who should be formally seconded to census cartography unit. In addition, DNE should identify some more staff having aptitude in cartographic work from its own ranks and put them in cartography unit. All these staff will receive on-the-job training while working with cartography adviser. After enumeration two cartographers may be sent for overseas training in specialized cartographic skills relevant to census work.

The cartographic preparations for the forthcoming census have to be started from scratch. Requisite preliminary preparations leading to compilation of base maps and cartographic field work need to be carried out to update/create the base maps,delineate enumeration areas and complete other related activities. The delineation and mapping of enumeration areas constitute most significant part of cartographic work as it provides the needed base to assess the requirements of

enumeration staff and other logistic support and ensures the accuracy of enumeration. The need of EA maps becomes more pronounced in the wake of prevailing internal situation in the country whereby the conduct of proper enumeration is seemingly feasible only in about 40 per cent areas of the country. The creation of good cartographic base in these areas will at least provide some credibility to the results of census carried out under these situations.

The work plan of cartographic activities has been revised keeping in view the proposed enumeration date (1 August 1990) and the current state of census preparations. Accordingly necessary action on the preparation of base maps, recruitment and training of field staff and other related activities should be initiated forthwith enabling the field work to get started by October 1989. The first phase of cartographic field work is envisaged to cover the provincial headquarters, cities and the accessible district headquarters and complete EA delineation in these areas by April 1990.

To meet the deadline about 60 field staff are to be recruited and deployed to various provinces according to magnitude of work in each. Some additional staff from the local offices of DINAGECA, Ministry of Public Administration etc. should also be seconded to the provincial census offices to work with the cartographic field staff. The provincial census co-ordination committees should be made committed through a directive from the National Census Coordination Committee to provide support to cartographic work.

The second phase of cartographic field work covering accessible rural areas should be taken up immediately after census enumeration so as to produce the EA maps for these areas for use in planning and conducting inter-censal household surveys which the DNE is planning tc institute in due course. However, if the date of census enumeration is deferred, the first phase of field work should be continued and extended to rural areas without any interruption.

The drafting of updated base maps and EA maps should commence soon after the start of field work and receipt of the field returns in respect of first area completed by the field staff in respective provinces. About 10 drafting staff needed for this job may be available at DINAGECA. However, if DINAGECA has difficulties in providing the required staff in full due to their engagement with other ongoing activities, the additional drafting staff may be seconded from the Ministry of Physical Planning to complete the census maps on time.

In the event of requisite resources as indicated above not made available to carry out the activities as outlined in the workplan, the field work may be curtailed to cover the plotting of boundaries up to the lowest level of areas and locations of settlements and obtaining the estimated population in respect of each settlement with the support of local administration. This information will help in determining the number of expected EAs in each settlement which in turn may be used to plan and conduct the census enumeration.

ANNEX I

LIST OF PERSONS CONTACTED DURING THE MISSION

Direcçäo Nacional de Estatistica (DNE)
- Mr. João Dias Loureiro, Director
- Mr. Alexandre J.M. Mondlane
- Mr. Gustavo Da Gloria Tiofilo Piores

Ministry of State Administration
- Mr. Sousa Cruz, Director

Imprensa Nacional de Moçambique
- Mr. Jose Santos Tembe, Director

Centro de Processamento de Dados
- Mr. Orlando D'Oliveria Comé, Director

Direcçao Nacional de Geografia E Cadastro (DINAGECA)
- José Manuel Almeirim Carvalho, Acting Director
- Jafar Daude Musa, Cartographer

Departamento de Cartografia
- José luis Guilovica Alferes

United Nations Pupulation Fund (UNFPA), Maputo
- Mr. R.E. Fernandez Castilla, UNFPA Country Director
- Mme Noemia P. Simoes, Programme Assistant

ANNEX II

REVISION OF RELEVANT SECTIONS/SUB-SECTIONS OF THE CENSUS PROJECT REQUEST - MOZ/87/P01

4. Project activities

4.1. Strategy

(a) Preparatory activities

The preparatory activities will comprise the development of the necessary machinery and instruments required for the successful completion of the enumeration and post-enumeration phases of the census.

The preparatory activities may be divided into eight groups. These are initial administrative arrangements, statistical planning stage I, cartographic preparations, publicity/census education, preparation of data processing plan, statistical planning stage II, additional administrative arrangements and recruitment and training of enumeration field staff.

The administrative arrangements will involve the establishment of a Central Census Office which will be the main administrative and planning machinery for the 1990 census. In addition, the legal basis for the census will be established and policy and advisory organs set up to provide essential support for the census organizers. Prior to the establishment of the Central Census Office, a planning group will be set up to undertake some of the initial statistical planning which will include the review of past census experience and consultations with data users to determine data requirements. Other activities which will be carried out during the first stage of statistical planning are: preparation of initial drafts of census enumeration documents and formal field test of the wording of census questions (August 1989).

Thus, the initial administrative arrangements and the statistical planning stage I will prepare the ground for the remaining pre-enumeration activities. The details of these activities as well as the strategy for the cartographic preparations are as follows:

(b) Cartographic preparations

The implementation of pre-enumeration cartographic activities will be carried out in two phases, namely: (i) office cartographic preparations and (ii) delineation and mapping of EAs and reproduction of EA maps. The activities of the first phase are planned to start immediately so that the second phase can take off on schedule. The necessary cartographic activities which can possibly be completed leading to production of EA maps for certain areas are included in the work plan.

Setting up permanent cartographics unit within DNE. The cartographic preparations for the previous census were carried out in a very limited way with the support of DINAGECA which has again been entrusted with the responsibility of producing maps for the upcoming census. Since the staff of DINAGECA do not have any experience in census cartography, it is planned to set up a cartography unit within the DNE by obtaining some core staff comprising about 4 cartographers on secondment from DINAGECA. These staff will receive on-the-job training while working with census cartography adviser who is expected to be recruited shortly on the project. After enumeration two cartographers will be given overseas training in specialized skills relevant to census mapping work. Necessary provisions for these fellowships have been made in the project budget.

Procurement of equipment and materials Revised lists of non-expendable cartographic equipment and expendable cartographic materials needed for carrying out various cartographic activities included in the work plan have been prepared. Necessary action on procurement of these materials and equipment has to be initiated as soon as possible ensuring their delivery on timely basis.

Preparation of base maps The office preparation of base maps for their field- up- dating and use in delineation and mapping of EAs has to start at the soonest and completed before the start of fieldwork in October 1989. The first phase of field work envisages to cover Maputo City, other provincial headquarters and cities and the district headquarters which are accessible and safe for this exercise. More than 10,000 EAs are expected to be delineated in these areas. The base maps of urban areas, planned to be covered during first phase, are available at DINAGECA on scales ranging from 1:2,500 to 1:15,000. Some of these maps are in the form of photogrammetric plots which are to be diazo printed for use in fieldwork. The maps on scales 1:10,000 to 1:15,000 are suitable for plotting of sub-divisional boundaries and carrying out EA delineation while those on 1:2,500 scale may be used for preparation of EA maps. Urban areas for which outline maps are not obtainable from any sources will be sketched on appropriate scales by the field staff who will be trained on the rlevant techniques of field sketching during the training. For rural areas the standard series of 1:50,000 toposheets is to be used as base for field updating and EA delineation. However in areas of low population densities (less than 15 persons per square kilometer) the 1:250,000 series of topo sheets will serve the purpose. Since postos administrativo are to be used as base units for EA delineation in rural areas, the copies of 1:50,000 maps are to be joined to construct mosaics of individual postos administrativo by the census cartography, staff who will also mark the outer boundaries of these units on the respective mosaics for reference and verification by the field staff.

For areas for which the 1:50,000 sheets are not available, the 1:50,000 scale photographic enlargement of the corresponding 1:250,000 sheets will be produced and diazo printed for use in the field work. Similarly the 1:50,000 sheets available in the

forms of photogrammetric plots or film positives will also have to be diazo printed for fieldwork. The sheets which have separate film positives for each color will first be printed on intermediate film to get a composite master copy which then will be used for production of diazo prints. The sheets for which printed copies are not available in required number are to be diazo printed from respective repro-materials and in case of the absence of later these may have to be photocopied to produce the film positives for diazo printing.

Recruitment and Training of field staff The recruitment and training of field staff is planned to be decentralized to provincial census offices. Initially about 60 field staff will be recruited in various provinces, the number depending on estimated work load in each. These staff will be given three weeks training by the trainers from Central Census Office. The training will comprise class room lectures, practical exercises and field demonstrations.

Cartographic field work

The first phase of cartographic fieldwork will cover the urban areas to carry out following activities:

(i) Updating of base map by adding new extensions and plotting new roads, feature found existing on the ground but not shown on the maps;

(ii) Plotting boundaries of lower sub-divisions (bairros and quarteiraos) if these are not already shown on the maps.

(iii) Preparing structure/household listings for the sub-divisions of lowest order to derive population estimates. If readily available these listing will be obtained from the concerned local administration.

(iv) Dividing lower sub-divisions into EAs of equitable size each containing about 500 persons.

(v) Preparing maps of individual EAs showing location of structures and other relevant ground details including features adopted for dealineation of EA boundaries.

(vi) Writing EA boundary descriptions and recompiling household lists for individual EAs.

The second phase of fieldwork covering rural areas is planned to be carried out after census enumeration in August 1990, if the DNE has intentions to institute the Household Survey Capability Programme in near future so that the EAs delineated thus may be used for inter-censal surveys. However, if the proposed date of census enumeration is deferred, the first phase of field work will be extended to cover the rural areas as a part of pre-enumeration cartographic work without any interruption. The strategy of fieldwork in rural areas will be more or less

same as suggested for urban areas. The delineation of EAs will be done within the "postos administrativo" but taking into account the boundaries of other lower level sub-divisions i.e. "localidales" and "circulos". The boundaries of these sub-divisions will be plotted on the base map with the help of concerned local administrative personnel. The number of EAs will be determined on the basis of estimated population counts obtained for the lowest level units. If there are villages with identifiable boundaries on the ground these will also be plotted on the base maps and adopted for EA delineation.

Taking into account the present internal situation in the country, it may be possible to carry out the exercise of base map updating and EA delineation and mapping in about 150 "postos administrativo" from about 64 districts all over the country. As expected the situation in some more areas may improve by the time of enumeration which then will be taken up for fieldwork at that stage.

There may be some isolated areas with normal situation but to reach such areas may require army escort. It considered otherwise safe and feasible for fieldwork these areas will also be dealineated into EAs by arranging army escorts for the field staff.

Drafting of EA maps The drafting of EA maps will start soon after completion of fieldwork in any of the urban areas or its parts and receipt of the completed field returns in the census office. The intensity of drafting work will inrease with the progress of fieldwork and receipt of more field returns in the census office. About 10 drafting staff may be required to complete the work in about 6 months line. If the DINAGECA has difficulties in releasing the required number of drafting staff to census work due to their own ongoing activities, arrangements will be made to second the additional staff from other departments such as physical planning division, etc.

(c) Trial (Pilot) census

In addition to the first field test which will be undertaken as part of the initial statistical planning, there will be a trial census to test the entire census programme including the strategy for data collection, quality and operational control procedures as well as data processing and covering evaluation plans. The trial census is planned to be conducted in November 1989.

The results and experiences of the trial census as well as those of the first field test and the administrative population count being planned for August 1989 by the Department of State. Administration will be used to improve the documents and procedures for the main census.

Data processing

The census questionnaires completed during the enumeration will be coded and verified using quality control procedures developed during the pre-enumeration phase. In view of the high expense which repair of the 3 PDP/11/34A computer systems used in processing the 1980 census would involve, micro-computer technology will be used for the processing of the 1990 census data and a request is being made under this project for the purchase of the necessary equipment.

Some of the micro-computers will be purchased in 1989 prior to the trial census. They will be used to process the trial census data to ensure that the data processing plans are tested before the main census enumeration in order to avoid bottlenecks at the data processing stage of the census programme.

The remaining machines will be purchased in 1990 but before the census enumeration which is planned for August 1990. Some spare parts will also be purchased and two staff members of the Data Processing Centre trained in micro-computer maintenance so that interruption of work due to breakdown of machine would be reduced to a minimum.

In view of anticipated problems relating to space and other logistics arrangements, consideration is being given to the possibility of coding and data entry operations being carried out in selected Provincial Headquarters. The strategy will first be tested during the trial census to determine its feasibility and efficiency.

WORK PLAN

Objective/activity	Place	Starting date and duration
I. To provide information on population characteristics as at August 1990 at national and sub-national levels		
A. Preparatory Activities		
1. Initial administrative arrangements		
(i) Setting up of Census Planning Group Responsible: Director, DNE Output: 3 Professional Staff of DNE/other government agencies in different disciplines assigned responsibility for initial planning for the 1990 Census.	Maputo	10 April 1989 (1 week)
(ii) Preparation of memorandum in respect of the 1990 census for submission through the Minister, National Planning Commission to the People's Assembly Responsible: Director, DNE/Census Planning Group Output: Memorandum giving brief outline of 1990 Census programme and estimate of expected overall cost and possible sources of funding including Government inputs	Maputo	May 1989 (2 weeks)
(iii) Approval of the 1990 census programme by the Government/People's Assembly Responsible: Government of People's Republic of Mozambique/National Commission for Planning Output: Letter/Section of proceedings of the People's Assembly indicating approval for the 1990 Population Census	Maputo	May 1989
(iv) Establishment of Central Census Office including appointment of a Census Director Responsible: Director, DNE Output: Number of various categories of Census Staff and Office accommodation with necessary facilities	Maputo	May 1989 (2 months)

Objective/Activity	Place	Starting date and duration
(v) Establishment of Central Census Co-ordinating Council Output: Letters to members of the Council and minutes of meetings of the Council	Maputo	July 1989 (Committee will be retained till publication of Census results)
(vi) Establishment of Technical Advisory Committee Responsible: Director of DNE Output: Letters of appointment to members of the Committee and minutes of meetings of the Committee	Maputo	July 1989 (1 month) - Committee will be retained till publication of Census results
(vii) Census enumeration field organization plans		
(a) Establishment of Province and District Census Co-ordinating Committees Responsible: Director, DNE/Census Director through National Census Co-ordinating through and Provincial/District Council Output: Letters of appointment to members of the Committees and minutes of meetings of the Committees	Maputo and Province/ District Headquarters	August 1989 (3 months) - Committees will continue to function till end of Census enumeration and coverage evaluation survey
(b) Establishment of District Census Offices Responsible: Head of Field Organization Section assisted by Province Statistics Officers Output: Assumption of duty of District Census Officers and supporting staff as well as Office accommodation with necessary facilities including storage	District Headquarters	October 1989 (3 months) - Offices will be retained till end of Census field work
(viii) Recruitment and assumption of duty of UN international personnel Responsible: Executing agency with concurrence of the Government (Director, DNE) Output: Assumption of duty of the following experts		
(a) Census Cartographer	Maputu	August 1989 (18 months)
(b) General Census Adviser	Maputo	September 1989 (16 months)

Objective/Activity	Place	Starting date and duration
(ix) Enactment of the 1990 Census Law (including drafting of the Law)	Maputo	September 1989 (2 months)
2. Statistical Planning Stage I		
(i) Determination of content of census questionnaire		
(a) Review of 1980 population census topics, tabulations and enumeration procedures as well as related international recommendations	Maputo	17 April 1989 (5 days)
Responsible: Census Planning Group Output: Paper outlining lessons from the 1980 census and general recommendations for the the collection, processing and publication of the 1990 census information.		
(b) Preparation of draft tabulation and publication programmes including topics to be covered as well as programme for the analysis of the census results.	Maputo	24 April 1989 (2 weeks)
Responsible: Census Planning Group in collaboration with Government Data Processing Centre and selected professionals of other Government agencies as well as relevant departments of Eduardo Mondlane University. Output: Lists of proposed Census topics and tabulations with their formats as well as outline of expected basic analysis of the Census data and titles of publications together with their annotated contents.		
(c) Consultations with data users		
1. Circulation of proposed list of 1990 Census topics and draft tabulation programme among major data users	Maputo and other places in the country	15 May 1989 (2 weeks)
Responsible: Census Planning Group Output: Summary of suggestions/comments of data users.		

Objective/Activity	Place	Starting data and duration
2. Follow-up discussions with major data users Responsible: Director, DNE/Census Planning Group Output: Report of discussions with proposals for revision of list of census topics and draft tabulation programme, if necessary	Maputo and selected provincial/ district Headquarters	29 May 1989 (2 days)
(ii) Preparation of initial drafts of census questionnaire and Enumerator's/Supervisor's Manuals. Responsible: Census Planning Group/ Statistical Planning Section of Central Census Office Output: Draft census questionnaire and Enumerator's/Supervisor's Manuals	Maputo	June 1989 (6 weeks)
(iii) Determination of quality control procedures and preparation of initial drafts of relevant documents/forms Responsible: Census Planning Group/Quality Control and Evaluation Section of CCO Output: Outline of quality control programme for the 1990 census and initial drafts of the necessary instructions and forms	Maputo	June 1989 (2 months)
(iv) Determination of scope of census evaluation programme and preparation of initial drafts of relevant documents Responsible: Census Planning Group/Quality Control and Evaluation Section of CCO Output: Outline of programme for the evaluation of the coverage of the 1990 Census and initial drafts of relevant documents for the implementation of the programme	Maputo	July 1989 (2 months)
(v) First field test of Census questionnaire and related documents Responsible: Statistical Planning, Quality Control and Evaluation and Field Organization Sections of CCO		

Objective/Activity	Place	Starting date and duration
Output: Report of field test and notes for revision of relevant documents after following activities		
(a) Reproduction of documents	Maputo	July 1989 (3 weeks)
(b) Recruitment and training	Maputo and/or selected areas	July/Aug. 1989 (3 weeks)
(c) Field work (enumeration)	Maputo and/or selected areas	August 1989 (1 week)
(d) Evaluation and preparation of report	Maputo	September 1989 (3 weeks)
3. Cartographic Preparation		
(i) Establishment of Census Cartography Unit within the Central Census Office by seconding some cartographers from DINAGECA, Ministry of Agriculture Responsible: Director DNE Output: Census Cartography Unit established	Maputo	May 1989 (1 month)
(ii) Acquisition of Resource Maps - 1:50,000 and 1:250,000 series of topographic maps, machine plots, layoutmaps and site plans of urban areas, maps of provinces, districts, etc. Responsible: Census Cartography Unit Output: Copies of resource maps	Maputo	May 1989 (1 month)
(iii) Office preparation of the base maps for field updating and EA delineation Responsible: Census Cartography Unit with support of DINAGECA Output: Copies of base maps prepared	Maputo	May 1989 (6 months)

Objective/Activity	Place	Starting date and duration
(iv) Ordering and receipt of cartographic equipment and supplies according to revised list of equipment and materials Responsible: Head of Census Office and the Executing Agency Output: Cartographic Equipment and supplies delivered	Maputo/ New York	June 1989 (3 months)
(v) Preparation and reproduction of instructions/ training manual for cartographic field staff and various forms to be used in the fieldwork Responsible: Census Cartography Unit Output: Instructions/training manual and field forms prepared and reproduced in required number of copies	Maputo	June 1989 (6 weeks)
(vi) Procurement of project vehicles and their dispatch to provincial census offices Responsible: Head of the Census Office and the Executing Agency Output: Eleven vehicles delivered to provinces and 2 delivered to Central Census Office	Maputo and abroad	July 1989 (7 months)
(vii) Training of the trainers selected from amongst the staff of DNE and DINAGECA Responsible: Head of Cartography Unit with support of DINAGECA Output: Required number of trainers trained	Maputo	August 1989 (1 month)
(viii) Recruitment and training of field mapping staff Responsible: Director of DNE with assistance of DINAGECA and provincial administration Output: Field mapping staff in required number recruited and trained	Maputo and Provincial Headquarters	August 1989 (2 months)

Objective/Activity	Place	Starting date and duration
(ix) Establishing contacts with Ministry of Local Administration, Defense, etc. to enlist the support of local administrative personnel and army escort for the cartographic fieldwork Responsible: Director DNE Output: Necessary instructions are passed to the concerned local administration and army authorities to respectively provide support to the cartographic work and escort to field staff wherever necessary	Maputo and elsewhere	August 1989 (2 months)
(x) First phase of cartographic fieldwork covering Maputo city, the provincial headquarters, other cities and the district headquarters to: (a) update the base maps; (b) verify and plot the boundaries of lower subdivisions; (c) obtain population estimates by household count at the lowest level of divisions; (d) delineate and code the EAs, and SAs; (e) prepare maps of individual EAs; (f) writing boundary description of EAs and prepare EA lists. Responsible: Cartographic field staff under supervision of Central Census Office and the respective provincial Census Co-ordination Committees Out-put: Updated base maps with EA delineation, EA maps and boundary descriptions, structure/ household lists prepared and dispatched to Central Census Office for further processing	Maputo and elsewhere in the country	October 1989 (6 months)
(xi) Drafting of the updated base maps and Enumeration Area maps Responsible: Census Cartography Unit with support of DINAGECA and other agencies Output: Fairly drafted master traces of base maps and EA maps	Maputo	November 1989 (6 months)
(xii) Reproduction of enumeration maps (EA maps and base maps showing EA and SA delineations) Responsible: Census Cartography Unit with support of DINAGECA Output: Copies of enumeration maps produced is required number.	Maputo	May 1990 (2 weeks)

Objective/Activity	Place	Starting date and duration
(xiii) Assembling of EA wise packages containing EA maps, boundary descriptions, structure/household lists, etc. and copies of the urban base maps and dispatching the same to field alongwith census questionnaires and other materials Responsible: Cartography Unit/Field Organization Section Output: EA wise packages prepared.	Maputo	
(xiv) Overseas training of two census/survey cartographers Responsible: Director DNE and the Executing Agency Output: Two cartographers trained	Maputo New York	September 1990 (3 months)
4. Publicity/Census education		
(i) Preparation of publicity/census education programme and necessary materials Responsible: Information and Mobilization Section Output: Detailed programme including time-table for publicity/census education campaign as well as the necessary materials	Maputo	July 1989 (4 months)
(ii) Publicity/census education campaign Responsible: Information and Mobilization Section and various agencies Output: Number of publicity/census education materials displayed/distributed, meetings addressed, articles published, radio/television announcements/discussions, etc.	All areas to be covered in the census	October 1989 (12 months)
5. Data Processing Plans		
(i) Determination of data processing equipment and their procurement Responsible: Director, DNE/Census Director and Director of Government Data Processing Centre as well as executing agency (assistance of ECA Census Data Processing Adviser may be requested)		

Objective/Activity	Place	Starting date and duration
Output: The delivery, installation and testing of data processing equipment according to the following schedule		
- delivery of first batch of equipment (10 micro-computers with related other expendable and non-expendable equipment) for processing trial (pilot) census data	Maputo	August 1989 (3 months)
- delivery of remaining data processing equipment and related expendable materials	Maputo and/ or selected provincial headquarters	March 1990 (5 months)
- delivery of specified spare parts for data processing	Maputo	January 1991 (2 months)
(ii) Training of census data processing staff		
(a) overseas training	USA and other country, as necessary	September 1989 (12 months)
Responsible: Director of DNE/Director of Data Processing Centre and Executing Agency		September 1990 (4 months)
Output: Two data processing staff trained in systems design and 4 others trained in programming		
(b) Local training:		
Workshops on census data processing	Maputo	
Responsible: Census Director/Director of Data Processing Centre, executing agency and/ or ECA Statistics Division		
Output: Number of DNE/CCO and Data Processing Centre Staff who would have participated in the following courses:		
(a) Course on operating system and data entry software		April 1990 (2 weeks)
(b) Course on editing software		June 1990 (4 weeks)
(c) Course on tabulation software		October 1990 (4 weeks)

Objective/Activity	Place	Starting date and duration
(c) Data processing studys tours		
Responsible: Director of DNE/Census Director as well as Director of Data Processing Centre	Burkina Faso and Kenya	May 1990 (3 weeks)
Output: 2 CCO/DNE/Data Processing Centre Staff who would have acquired knowledge of Burkina Faso and/or Kenya experience on census data processing		
(d) Training on micro-computer hardware maintenance		
Responsible: Director of Data Processing Centre/ Census Director and executing agency	Abroad	June 1990 (2 months)
Output: Data Processing Centre Staff trained in micro computer maintenance		
(iii) Preparation, designing and testing of data processing procedures	Maputo	April 1990 (15 months)
Responsible: Census Data Processing Section with the guidance and assistance of data processing expert		
Output: Programmes and instructions for the processing of the 1990 census data		
5. Statistical Planning Stage II		
(i) Training workshop on census organization with emphasis on questionnaire design, enumeration procedures, field organization, quality/ operational control and coverage evaluation	Maputo	September 1989 (3 weeks)
Responsible: Director of DNE, executing agency and ECA Statistics Division		
Output: About 10 to 15 census office staff trained in census organization		
(ii) Review of census work plan and budget	Maputo	October 1989 (2 weeks)
Responsible: Census Director and Executing Agency		
Output: Comprehensive census work plan indicating revised census time-table, schedule for delivery of inputs and sources of funds		

Objective/Activity	Place	Starting date and duration
(iii) Revision of tabulation programme, census questionnaire and related documents Responsible: Statistical Planning Section, in collaboration with census data processing section at Government Data Processing Centre Output: Second drafts of tabulation programme, census questionnaire and Enumerator's/ Supervisor's manuals	Maputo	October 1989 (4 weeks)
(iv) Preparation of other census enumeration and data processing documents Responsible: Statistical Planning Section in collaboration with Census Data Processing and Field Organization Sections Output: Final versions of the following documents: (a) Administrative Guidelines and Training Manual for Province/District Census Officers (b) Occupation, industry and other codes lists (c) Coding/editing instructions and computer edit specifications as well as instructions for detection and automatic correction of errors	Maputo	October 1989 (6 months)
(v) Trial (pilot) census Responsible: Census Director and Heads of Section of CCO Output: Report of the trial census with proposals for any required revisions after completion of the following activities:		
(a) Printing/reproduction of documents	Maputo	October 1989 (3 weeks)
(b) Recruitment and training of field staff	Maputo and selected districts	Oct./November 1989 (5 weeks)
(c) Enumeration	Selected areas	November 1989 (2 weeks)
(d) Coverage evaluation survey (if part of evaluation programme)	Selected areas	December 1989 (10 days)

Objective/Activity	Place	Starting date and duration
(e) Review of results and preparation of proposals (notes) for any required revisions.	Maputo and selected	December 1989 (2 weeks)
(f) Processing, evaluation, analysis and preparation of reports	Maputo and selected provincial HQs	January 1990 (4 months)
(vi) Recruitment and assumption of duty of additional UN International personnel		
Responsible: Executing Agency with concurrence of the Government (Director, DNE)		
Output: Assumption of duty of the following experts:		
(a) Consultant, sampling statistician	Maputo	January 1990 (1 month)
(b) Census Data Processing Expert	Maputo	April 1990 (24 months)
(vii) Revision of tabulation programme, census questionnaire and related documents in the light of discussions and lessons from trial census	Maputo	January 1990 (3 months)
Responsible: Statistical Planning and Quality Control/Evaluation Section in collaboration with Field Organization and Census Data Processing Sections		
Output: Final versions of tabulation programme, census questionnaire, quality/operational control as well as coverage evaluation documents and instructions'manuals for various categories census field staff and data processing personnel		
7. Procurement of paper for printing census questionnaire and related documents as well as materials for the enumeration field staff	Maputo and abroad	September 1989 (5 months)
Responsible: Census Director, Head of Administration and Supplies Section of CCO and executing agency		
Output: Delivery of required quantities of printing paper and materials needed by the enumeration field staff		

Objective/Activity	Place	Starting date and duration
8. Printing/reproduction of census enumeration and coverage evaluation survey documents		
(i) Formal contact with Government Printer and/or other printing establishment to arrange for printing of census documents Responsible: Director of DNE/Census Director and Head of Administration and Supplies Section of CCO Output: Firm arrangements for printing census documents with printers' confirmation of deadline for submission of manuscripts and receipt of printed documents	Maputo	December 1989 1 week
(ii) Printing/reproduction of census enumeration and coverage evaluation survey documents Responsible: Statistical Planning, Quality Control/Evaluation and Administration/Supplies Sections of CCO as well as Government Printer and/or other printing establishment Output: Required number of printed census and coverage evaluation survey questionnaire and related documents delivered at CCO	Maputo	February 1990 (4 months)
9. Recruitment of Trainers, Field Supervisors and Enumerators and training of enumeration field staff and related pre-enumeration field operations		
(i) Recruitment/selection of trainers of census enumeration field staff Responsible: Census Director and Head of Statistical Planning Section Output: List of names and educational qualification of 200 persons selected as trainers	Maputo	January 1990 (1 month)
(ii) Training of Province/District Census Officers and Trainers Responsible: Central Census Office Staff Output: Province/District Census Officers and Trainers trained in census data collection procedures	Maputo and/or Provincial HQs	February 1990 (2 months)

Objective/Activity	Place	Starting date and duration
(iii) Recruitment and training of field supervisors	Districts	April 1990 (1 month)
Responsible: Province/District Census Officers and Trainers with support of Field Organization and Statistical Planning Section		
Output: List of names and educational qualification of 7,000 trained Census Field Supervisors		
(iv) Checking of SA/EA boundaries	All EAs	May 1990 (8 days)
Responsible: Field Supervisors		
Output: All SA/EA boundaries checked and problems resolved		
(v) Recruitment and training of Enumerators	District HQs and selected areas	May 1990 (2 and half months)
Responsible: District Census Officers and Trainers assisted by Field Supervisors		
Output: 35,000 trained enumerators		
(vi) Deployment of Supervisors and Enumerators after training	All SAs/EAs	July 1990 (5 days)
Responsible: District Census Officers with the support of Province Census Officers and Field Organization Section of CCO		
Output: 6,300 supervisors and 31,400 enumerators at their respective SAs/EAs		
10. Packing of census enumeration documents and other materials and their despatch to Census Field Offices	Maputo and District HQs	April 1990 (3 months)
Responsible: Field Organization Section		
Output: Signed receipts (completed operational control forms) indicating receipt of documents and other materials by Province/ District Census Officers		

Objective/Activity	Place	Starting date and duration
8. Main Census Enumeration (same)	All areas or delimited part of country	August 1990 (2 weeks)
C. Post-enumeration		
4. Data processing		
Responsible: Data Processing and Statistical Planning Section		
Output: They comprise the following after the indicated specific activity:		
(i) Coding and verification of coding	Maputo and selected Provincial HQs	October 1990 (10 months)
Output: Coded and verified questionnaires		
(ii) Data entry	Maputo and selected Provincial	November 1990 (15 months)
Output: Unedited census data file		
(iii) Data editing	Maputo and selected Provincial HQs	November 1990 (15 months)
Output: Edited data file		
(iv) Tabulation: Computer print-outs of tabulations for publication	Maputo	January 1991 (18 months)
II. To Interprete and disseminate the 1990 Population Census Data in a manner which will ensure their effective applciations		
A. Preparation of Census Reports		
1. Recruitment and assumption of duty of UN international personnel	Maputo and New York	January 1992 (24 months)
Responsible: Executing agency with concurrence of the Government (Director, DNE)		
Output: Assumption of duty of Demographic analysis expert		
2. Training workshops on census data analysis, report writing and publication of reports	Maputo	
Responsible: Census Director, Demographic		

Objective/Activity	Place	Starting date and duration
analysis expert and executing agency		
Output: Number of CCO and DNE staff trained during the following courses:		
(i) Course on census data analysis and report writing		February 1992 (3 weeks)
(ii) Course on demographic analysis software		March 1992 (3 weeks)
(iii) Course on graphics production and desktop publishing		October 1992 (3 weeks)
3. Evaluation and basic analysis of census results	Maputo	July 1992 (18 months)
Responsible: Statistical Planning Section with the collaboration of relevant departments of Eduardo Mondlane University and selected professionals from other Government agencies under the guidance and assistance of UN expert in Demographic Analysis/Population Division, ECA		
Output: Manuscripts of analytical report(s) and highlights of census results for general readers and decision-makers.		

UNITED NATIONS FUND FOR POPULATION ACTIVITIES
1988 REPHASED PROJECT BUDGETS

PAGE: 1
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MONTH - DECEMBER 1988
REGION - AFRICA
COUNTRY - MOZAMBIQUE
PROJECT NUMBER - MOZ-88-P01-B-33-01 - UN-TCD — WORK PLAN - 114 CENSUS
DATE OF APPROVAL/REVISION-15/12/88 — SHORT TITLE - 1990 POPULATION CENSUS
SCHEDULED START DATE - 01/01/88 DURATION - 2/0 — UNFPA: CONTRIBUTION-US$
1990 POPULATION CENSUS — TYPE - PRIORITY PROJECT
STATUS - PROJECT IN PROGRESS

BUDGET LINE	DESCRIPTION	1989		1990		1991		1992		1993		TOTAL	
10.00	PROJECT PERSONNEL												
11.00	UN International Personnel												
11.01	Census cartographer	5.0	35,000	12.0	84,000	1.0	7,000	-	-	-	-	18.0	126,000
11.02	General Census Adviser	4.0	28,000	12.0	84,000	-	-	-	-	-	-	16.0	112,000
11.03	Data Processing Expert	-	-	9.0	63,000	12.0	85,600	3.0	21,500	-	-	24.0	170,100
11.04	Consultant, sampling statistician	-	-	1.0	7,000	-	-	-	-	-	-	1.0	7,000
11.05	Demographic data analysis expert	-	-	-	-	-	-	12.0	84,000	12.0	86,100	24.0	170,100
11.99	Sub-total	9.0	63,000	34.0	238,000	13.0	92,600	15.0	105,000	12.0	86,100	83.0	585,200

BUDGET LINE	DESCRIPTION	1989		1990		1991		1992		1993		TOTAL
3.	Administrative Support cost											
3.01	Administrative support personnel	5.0	3,400	12.0	8,000	12.0	8,200	12.0	8,400	12.0	8,600	53.0	36,600
3.99	Sub-total	5.0	3,400	12.0	8,000	12.0	8,200	12.0	8,400	12.0	8,600	53.0	36,600
15.	Travel costs												
15.01	Travel and perdiem. project personnel		500		5,000	-	-		-		-		5,500
15.02	Mission costs		5,000		12,000		5,000		7,000		-		29,000
15.99	Sub-total		5,500		17,000		5,000		7,000				34,500
19.	Component Total	14.0	71,300	40.0	26,300	25.0	105,800	27.0	120,300	24.0	94,700	136.0	656,300

BUDGET LINE	DESCRIPTION	1989		1990		1991		1992		1993		TOTAL	
30.	TRAINING												
31	Fellowships												
31.01	Two census cartography	-	-	3.0	12,000	3.0	12,000	-	-	-	-	6.0	24,000
31.02	Six data processing	12.0	46,000	20.0	76,000	-	-	-	-	-	-	32.0	122,000
31.99	Sub-total	12.0	46,000	23.0	88,000	3.0	12,000	-	-	-	-	38.0	146,000
34.	STUDY TOURS												
34.01	Data processing study tour	-	-	1.5	9,000	-	-	-	-	-	-	1.5	9,000
34.99	Sub-total	-	-	1.5	9,000	-						1.5	9,000
36.	OTHER TRAINING												
36.01	Computer hardware maintenance	-	-	4.0	16,000	-	-	-	-	-	-	4.0	16,000
36.99	Sub-total	-	-	4.0	16,000	-	-	-	-	-	-	4.0	16,000
39.	Component total	12.0	46,000	28.5	113,000	3.0	12,000	-	-	-	-	43.5	171,000

BUDGET LINE	DESCRIPTION	1989	1990	1991	1992	1993	TOTAL
40.	EQUIPMENT						
41.	Expendable equipment						
41.98	Expendable equipment, other	249,000	10,000	-	-	-	259,000
41.99	Sub-total	249,000	10,000	-	-	-	259,000
42.	Non expendable equipment						
42.01	Data processing equipment	70,000	190,000	-	-	-	260,000
42.04	Vehicles	275,000	50,000	-	-	-	325,000
42.05	Office equipment	70,000	15,000	-	-	-	85,000
42.99	Sub-total	415,000	255,000	-	-	-	670,000
49.	Component total	664,000	265,000	-	-	-	929,000

BUDGET LINE	DESCRIPTION	1989	1990	1991	1992	1993	TOTAL
50.	MISCELLANEOUS						
51.	Operation and maintenance of equipment		30,000	- 20,000	- -	- -	50,000
52.	Report and printing costs		-	- -	- 10,000	8,000	18,000
53.	Sundry	8,000	6,700	- 1,400	- 1,300	- 1,000	- 18,400
59.	Component total	8,000	36,700	- 21,400	- 11,300	- 9,000	- 86,400
99.	GRAND TOTAL	789,300	677,700	139,200	132,200	103,700	1,842,700

10. Description and justification of project inputs

The UNFPA contribution will cover international project personnel, cost of administrative support, mission costs, training, equipment and running cost of vehicles.

10. Project Personnel

11. UN International Personnel

It is expected that some of the staff from various government agencies who were seconded to form the Central Census Office for the 1980 census would be available for the planning and implementation of the 1990 census programme. All the prospective census staff will, however, have very limited experience in modern census taking, if any. The capability to plan and conduct the 1990 census and subsequent censuses effectively and publish accurate and timely results, therefore needs to be built up.

In the existing situation, substantial technical support is needed to plan and conduct the 1990 census. Provision has therefore been made for long-term resident advisers in census cartography, general census planning and management, census data processing and demographic analysis. In addition, provision has been made for consultancy in sampling.

The census cartographer will help in preparing a comprehensive census cartography programme for the 1990 census and the inter-censal period. He/she will also train and assist national personnel to carry out the 1990 census cartographic preparations and assist in setting up a modest cartographic unit at DNE.

The general census adviser will provide planning and management assistance in the organization of the census and also generally train national personnel in census taking.

The census data processing expert will be required for a period of two years from April 1990. It is planned to use micro-computer technology for all aspects of the 1990 census data processing but the national personnel do not have experience in that direction. The expert, who should have experience in the use of micro computer technology in a statistical environment, will therefore advise, train local personnel and actively assist in processing the census data.

The demographic analysis expert will be required for two years from January 1992 to guide and assist local staff in the evaluation and analysis of the census data. He/she will also conduct training workshop on techniques of census data analysis for the staff of the Demographic Department of DNE, and other professionals who will be involved in the analysis of the 1990 census data.

The consultant in sampling will be required to advise and assist in the sampling aspects of the census programme. In particular, he will advise on statistical quality control procedures for the census operations and the sample design and selection for the census coverage evaluation survey and then provide guidance in making the required preparations for the implementation of the procedures recommended.

The cost per person/month of the international personnel is estimated at US$7,000.00.

13. Administrative Support Costs

Administrative and sercretarial assistance will be required to support project personnel. This support will assist in the smooth implementation of project activities and also ensure the timely preparation of project reports.

The cost per person/month is estimated at US$700.00.

30. Training

31. Fellowships

The long-term objectives of the project include training of national personnel in various fields to strengthen national capability for statistical enquiries. Provision has therefore been made for the following fellowships to supplement training programmes under other projects such as Preparatory Assistance for Establishment of Population Planning Unit - Moz/86/P05 and Introduction to Population Studies at Eduardo Mondlane University - MOZ/86/P04.

Six fellowships in data processing are being requested to train the staff of the Data Processing Centre who will be responsible for the processing of the 1990 census data. One of the fellowships will be for 12 months starting in September 1989 to train one person in census data processing including programming. The remaining five fellowships will be for short-term training, each lasting four months. Two will be for training in systems analysis starting in September 1989 and three for training in programming starting September 1990.

The annual cost of each fellowship is estimated at US$36,000.00.

34. Study tours

34.01 Data Processing Study Tour

Provision has been made for 2 DNE/Data Processing Centre staff to travel to Burkina Faso and/or Kenya to discuss and observe the use of micro-computers in the processing of population census data.

The cost of the study tour is estimated at US$9,000.00

36. Other training

Provision has been made for two months training abroad in micro-computer hardware maintenance for two staff members of the Data Processing Centre. This will reduce maintenance cost of the equipment and also ensure timely repairs.

40. Equipment

41. Expendable equipment and supplies

Provision has been made for data processing and cartographic materials as well as office supplies including printing paper which are not available in the country.

Data processing materials

These include: floppy disks, Bernoulli cartridges, standard tapes, ribbons/cartridges for printers, dust covers, tool and cleaning kits, computer stationery, etc. A detailed list indicating quantities of each item will be provided later.

Provision has been made for US$ 40,000 in 1989 and US$10,000 in 1990.

Printing paper and office supplies

These include: 95 tons of printing paper for the printing of census questionnaire and other census enumeration documents, typewriting and photo-copy paper and paper rolls for calculating machines.

Provision has been made for US$145,000 in 1989 to cover the cost of the items required.

Cartographic materials

These include cost of various maps and cartographic supplies. A detailed list is attached. Budgetary provision has been made for US$64,000 in 1989.

42. Non-expendable equipment

42.01 Data processing

The 3 PDP/11/34A computer systems used to process the 1980 census cannot be used to process the 1990 census data. The cost of repairs will be high and their use will not be cost-effective.

It is therefore planned to use micro-computer technology for all aspects of the 1990 census data processing.

Preliminary estimates indicate that the following will be required:

- 47 IBM-PS/2 model 50 or compatible micro-computers for data entry.

- 6 IBM-PS2 model 80-115 or compatible micro-computers for editing and tabulation

- other hardware including a number of UPS, Bernoulli boxes, tape drives, printers, spare parts, etc.

- Software packages including CENTRY (IMPS), CONCOR/PC and CENTS/PC

Some of the equipment will be purchased in 1989 and the rest in 1990. Provision has therefore been made for US$70,000 in 1989 and US$190,000 in 1990 to cover the cost of the computer hardware and software.

42.04 Vehicles

The following are being requested under the project:

11 Landcruisers (diesel) in 1989
2 Peugeot estates in 1989; and
25 Honda 100cc motor cycles in 1990

The vehicles will supplement others from government sources for the field mapping and other census activities by the staff of the central census office. They will also be used for transportation of field staff and documents during the enumeration period.

Provision has been made for US$275,000 in 1989 to cover the vehicles and spare parts and US$50,000 in 1990 for the motor cycles.

42.05 Office equipment

These include: photo-copying machine for the central census office, duplicating machines for the province census offices, calculating machines for the district census offices, typewriters and cartographic equipment. A detailed list of the cartographic equipment is attached.

Provision has been made for US$ 70,000 in 1989 and USD. 15,000 in 1990 for the purchase of the cartographic and office equipment required.